

## **Measuring Potential Noise Backgrounds for the Telescope Array Radar (TARA) near Long Ridge, UT**

*Tuesday 27 August 2013 14:30 (30 minutes)*

The main transmitter and receiver stations for the Telescope Array Radar bi-static cosmic ray detection system are now complete. To perform background-free coincidence studies, low-cost, sustainable power remote stations are being designed and built. A site survey was conducted in March 2013 with the goal of finding a remote site in the desert near the main TARA receiver at Long Ridge, UT. The two main goals were to locate a site with little or no radio backgrounds, and a site that was within range of the 40 kW TARA transmitter. A collection of possible future sites were located, and monte carlo simulations were performed which indicate that there is little cost to signal sensitivity by placing a detector at any of these sites. The remote station concept, noise data, and monte carlo analysis will all be presented.

**Presenter:** HANSON, Jordan

**Session Classification:** Ultra-high-energy messengers